FIG. 1

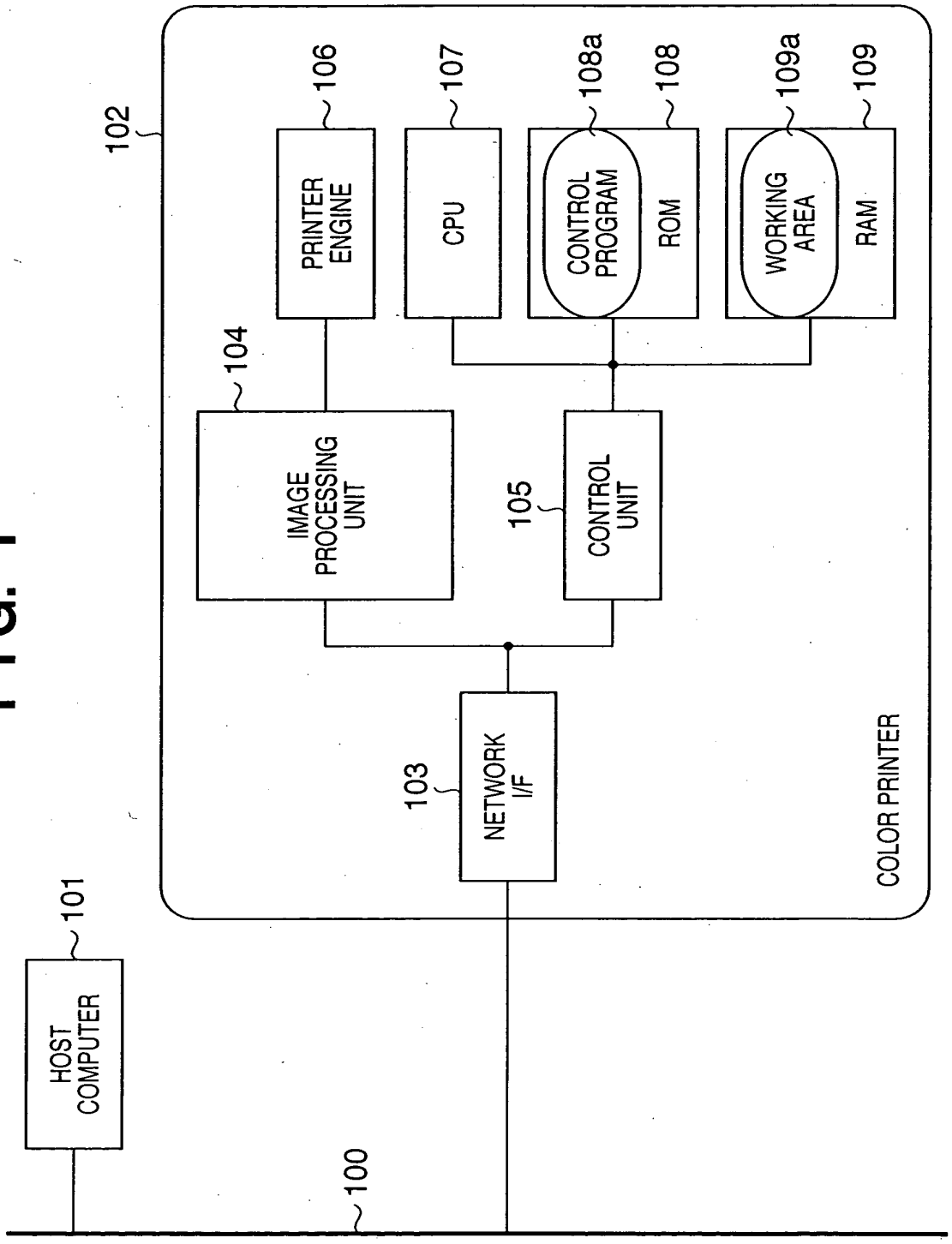

HOST COMPUTER
101
100
102
PRINTER ENGINE
106
CPU
107
CONTROL PROGRAM
ROM
108a
108
WORKING AREA
RAM
109a
109
IMAGE PROCESSING UNIT
104
CONTROL UNIT
105
NETWORK I/F
103
COLOR PRINTER

FIG. 2

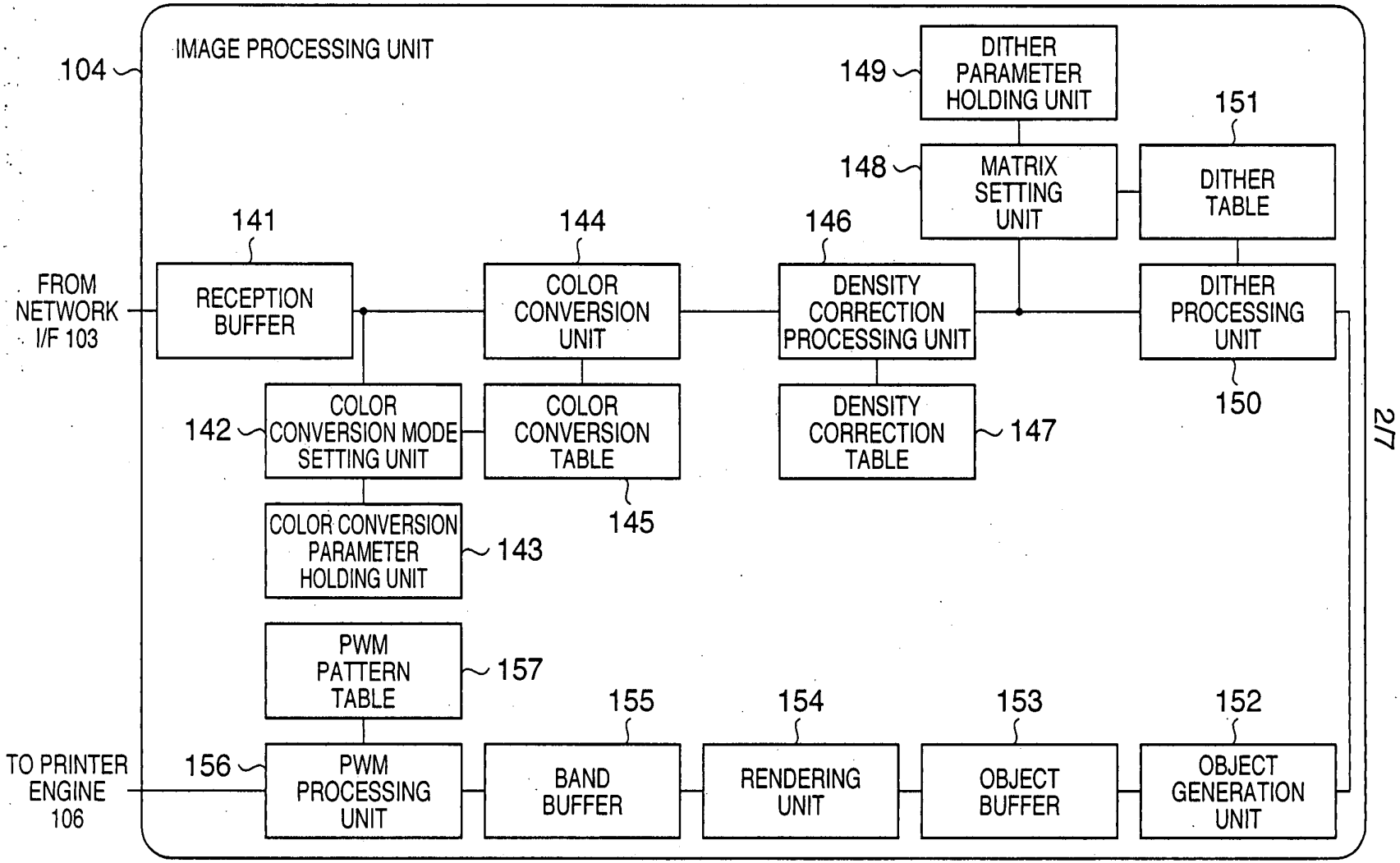


IMAGE PROCESSING UNIT
104
149
DITHER PARAMETER HOLDING UNIT
151
148
MATRIX SETTING UNIT
DITHER TABLE
141
144
146
FROM NETWORK I/F 103
RECEPTION BUFFER
COLOR CONVERSION UNIT
DENSITY CORRECTION PROCESSING UNIT
DITHER PROCESSING UNIT
150
142
COLOR CONVERSION MODE SETTING UNIT
COLOR CONVERSION TABLE
DENSITY CORRECTION TABLE
147
145
COLOR CONVERSION PARAMETER HOLDING UNIT
143
PWM PATTERN TABLE
157
155
154
153
152
TO PRINTER ENGINE 106
156
PWM PROCESSING UNIT
BAND BUFFER
RENDERING UNIT
OBJECT BUFFER
OBJECT GENERATION UNIT

FIG. 3

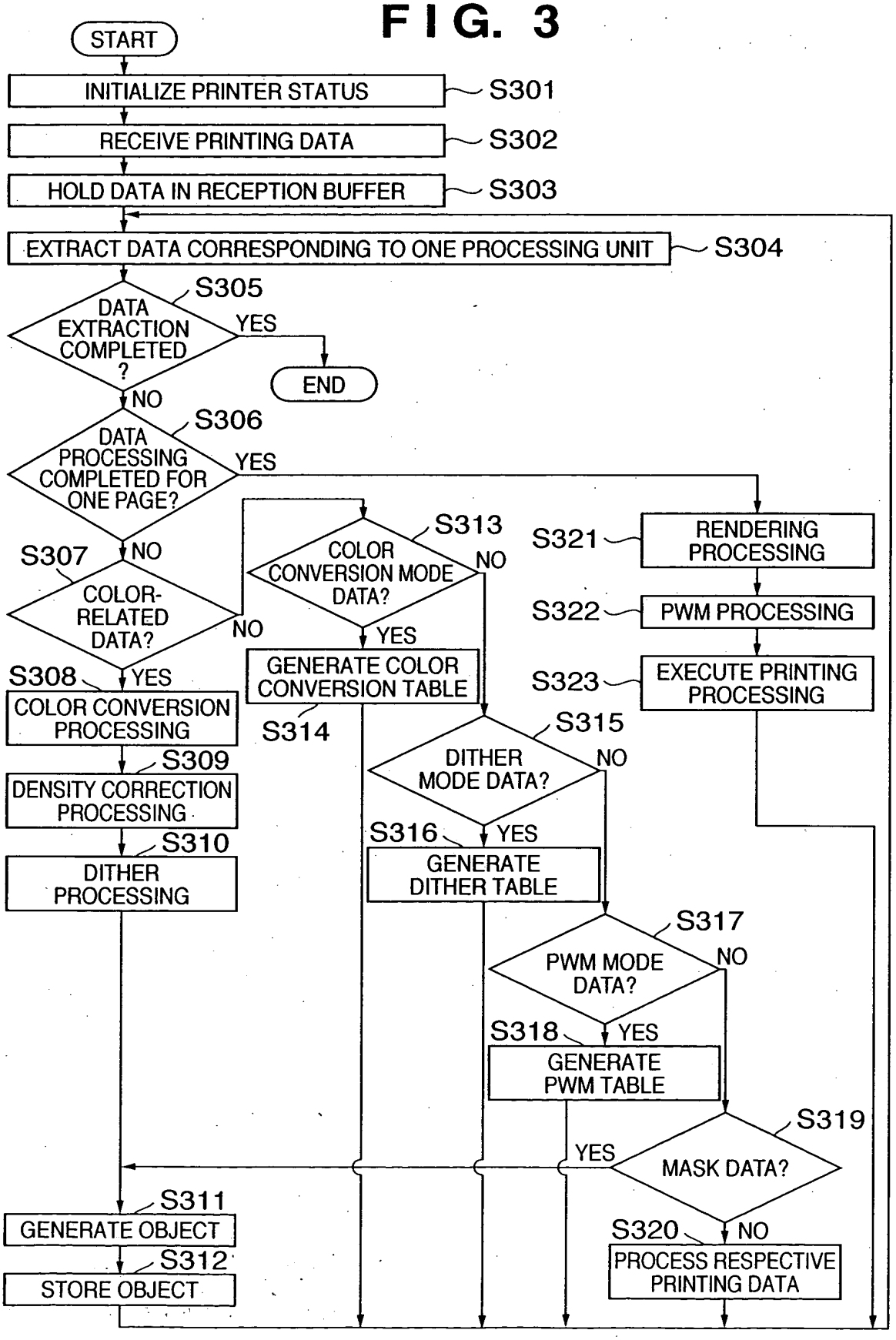

START
INITIALIZE PRINTER STATUS
S301
RECEIVE PRINTING DATA
S302
HOLD DATA IN RECEPTION BUFFER
S303
EXTRACT DATA CORRESPONDING TO ONE PROCESSING UNIT
S304
S305
DATA EXTRACTION COMPLETED ?
YES
END
NO
S306
DATA PROCESSING COMPLETED FOR ONE PAGE?
YES
NO
S307
COLOR-RELATED DATA?
NO
YES
S308
COLOR CONVERSION PROCESSING
S309
DENSITY CORRECTION PROCESSING
S310
DITHER PROCESSING
S311
GENERATE OBJECT
S312
STORE OBJECT
S313
COLOR CONVERSION MODE DATA?
NO
YES
GENERATE COLOR CONVERSION TABLE
S314
S315
DITHER MODE DATA?
NO
YES
S316
GENERATE DITHER TABLE
S317
PWM MODE DATA?
NO
YES
S318
GENERATE PWM TABLE
S319
MASK DATA?
YES
NO
S320
PROCESS RESPECTIVE PRINTING DATA
S321
RENDERING PROCESSING
S322
PWM PROCESSING
S323
EXECUTE PRINTING PROCESSING

FIG. 4

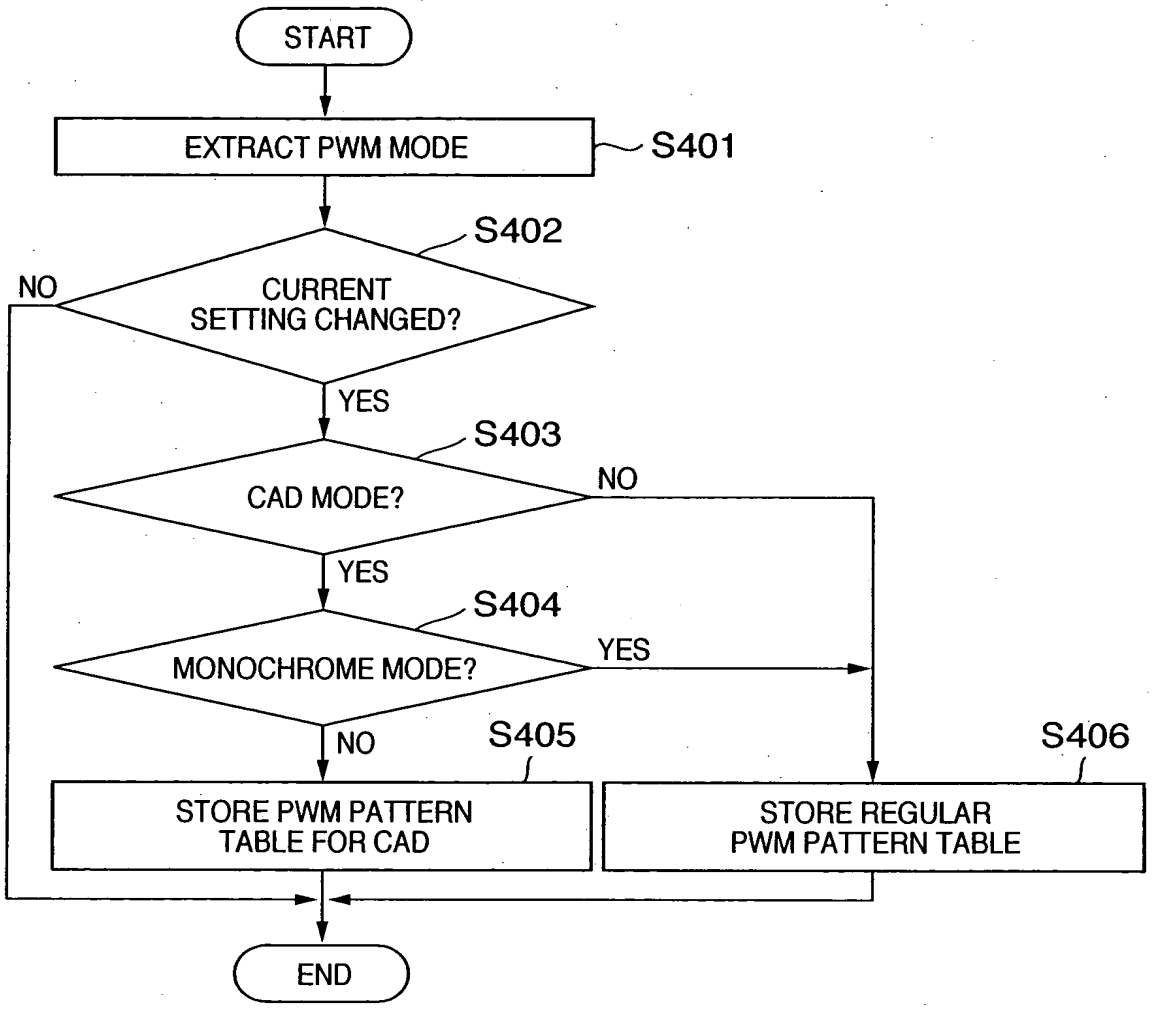
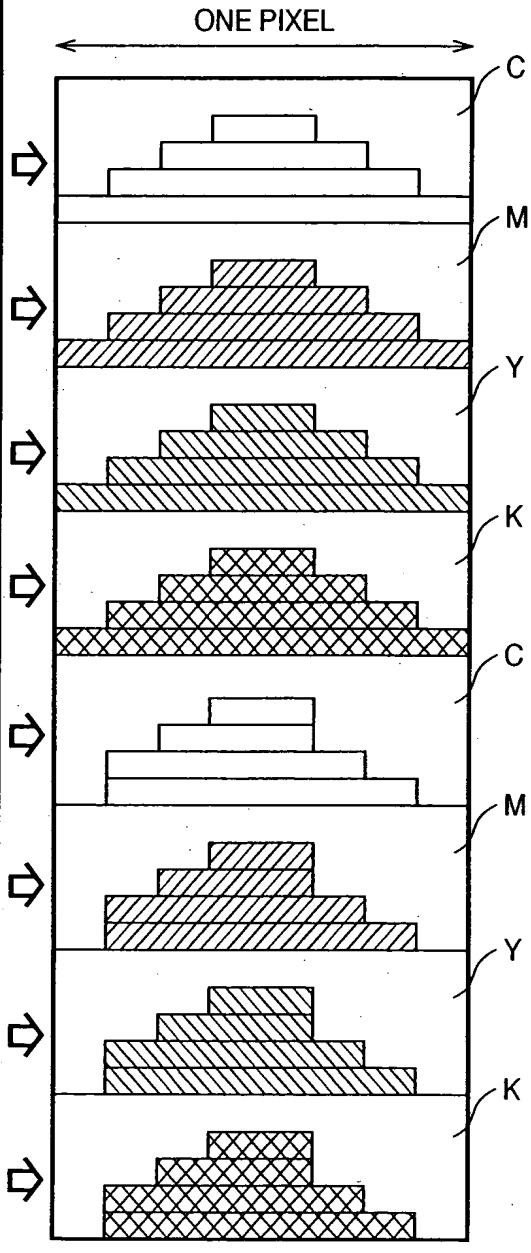

START
EXTRACT PWM MODE
S401
S402
CURRENT SETTING CHANGED?
NO
YES
S403
CAD MODE?
NO
YES
S404
MONOCHROME MODE?
YES
NO
S405
S406
STORE PWM PATTERN TABLE FOR CAD
STORE REGULAR PWM PATTERN TABLE
END

FIG. 5

Mode	Color		PWM Table							
B10	B9	B8	B7	B6	B5	B4	B3	B2	B1	B0
0	0	0	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	1	0	0
			0	1	1	1	1	1	1	0
			1	1	1	1	1	1	1	1
	0	1	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	1	0	0
			0	1	1	1	1	1	1	0
			1	1	1	1	1	1	1	1
	1	0	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	1	0	0
			0	1	1	1	1	1	1	0
			1	1	1	1	1	1	1	1
	1	1	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	1	0	0
			0	1	1	1	1	1	1	0
			1	1	1	1	1	1	1	1
1	0	0	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	0	0	0
			0	1	1	1	1	1	0	0
			0	1	1	1	1	1	1	0
	0	1	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	0	0	0
			0	1	1	1	1	1	0	0
			0	1	1	1	1	1	1	0
	1	0	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	0	0	0
			0	1	1	1	1	1	0	0
			0	1	1	1	1	1	1	0
	1	1	0	0	0	0	0	0	0	0
			0	0	0	1	1	0	0	0
			0	0	1	1	1	0	0	0
			0	1	1	1	1	1	0	0
			0	1	1	1	1	1	1	0



GROWTH PATTERN

FIG. 6

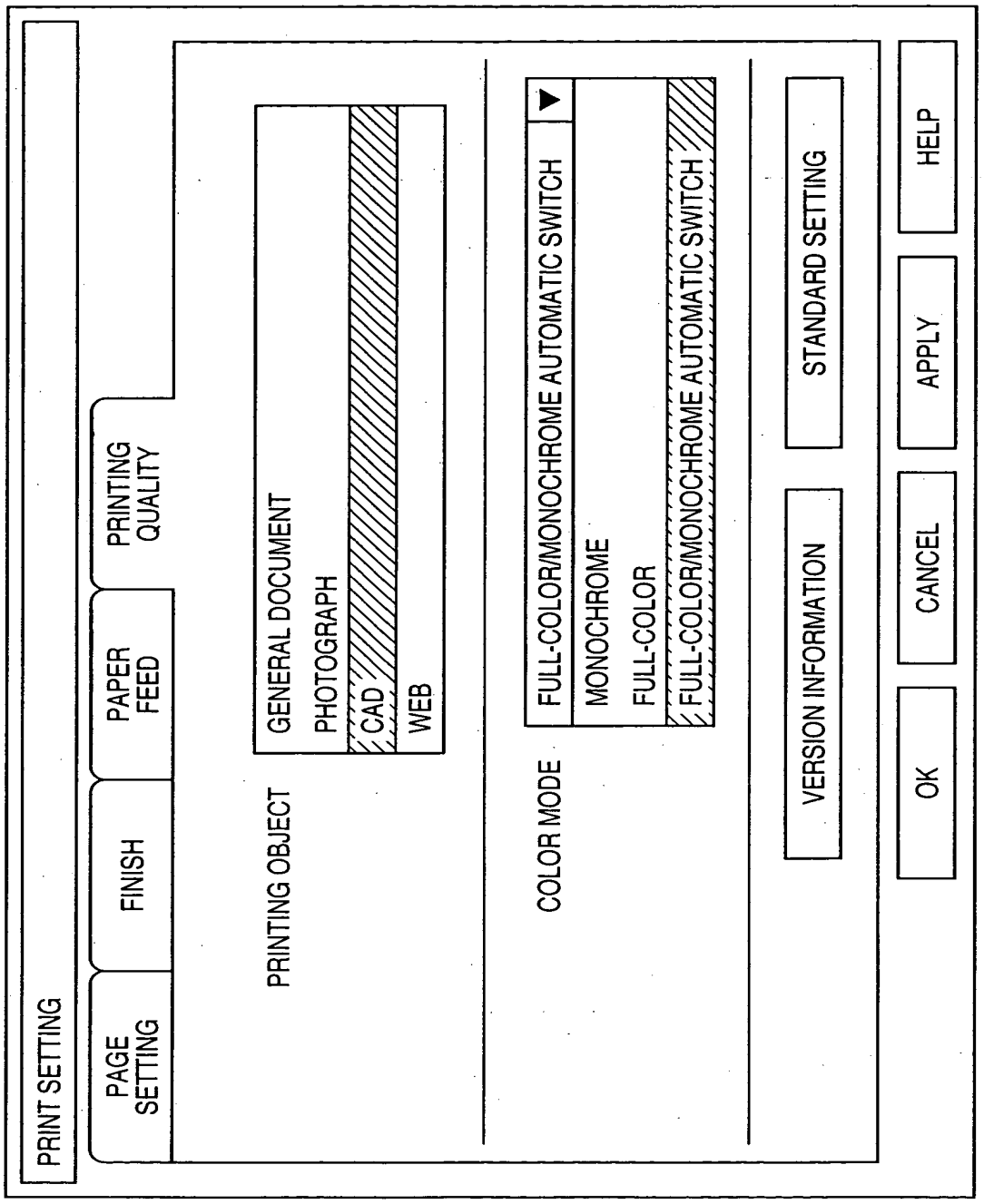
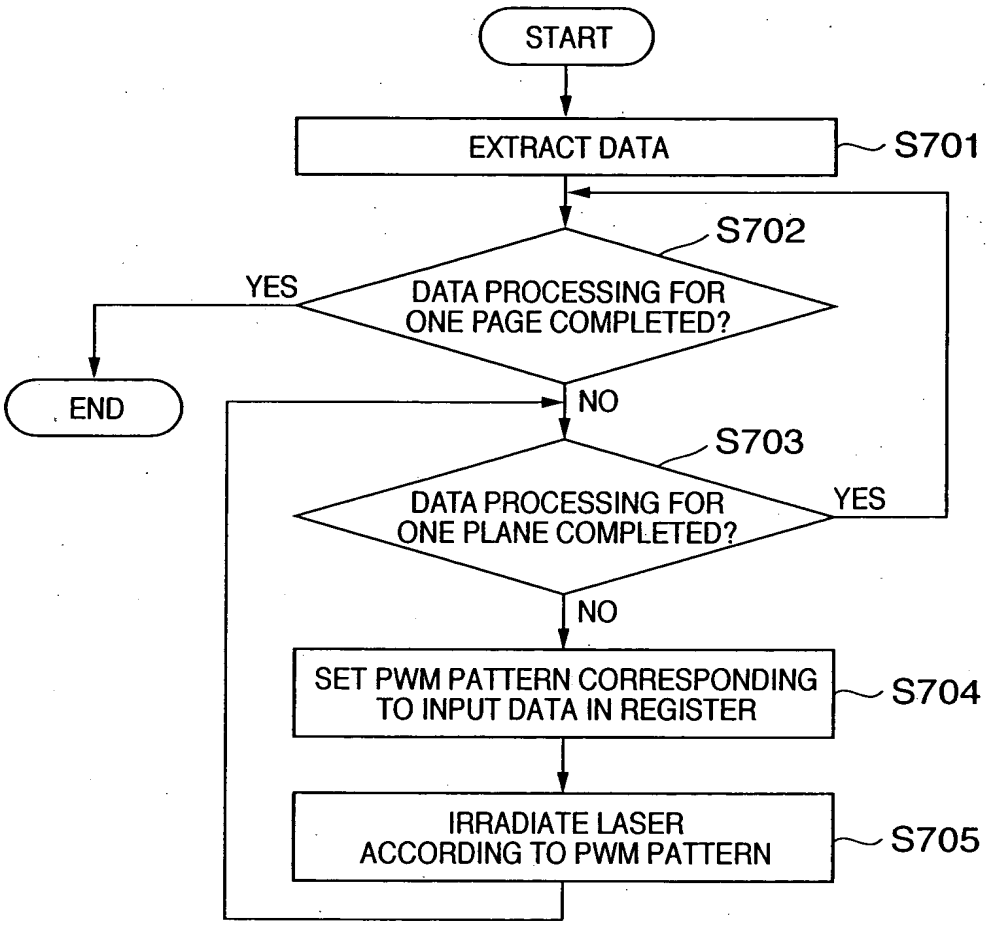

PRINT SETTING
PAGE SETTING
FINISH
PAPER FEED
PRINTING QUALITY
PRINTING OBJECT
GENERAL DOCUMENT
PHOTOGRAPH
CAD
WEB
COLOR MODE
FULL-COLOR/MONOCHROME AUTOMATIC SWITCH
MONOCHROME
FULL-COLOR
FULL-COLOR/MONOCHROME AUTOMATIC SWITCH
VERSION INFORMATION
STANDARD SETTING
OK
CANCEL
APPLY
HELP

FIG. 7


START
EXTRACT DATA
S701
S702
DATA PROCESSING FOR ONE PAGE COMPLETED?
YES
END
NO
S703
DATA PROCESSING FOR ONE PLANE COMPLETED?
YES
NO
SET PWM PATTERN CORRESPONDING TO INPUT DATA IN REGISTER
S704
IRRADIATE LASER ACCORDING TO PWM PATTERN
S705